



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.          | CONFIRMATION NO.       |
|--|-------------|----------------------|------------------------------|------------------------|
| 10/510,603   | 04/19/2005  | Roy Lyon             | 620-340                      | 3612                   |
| 23117  | 7590        | 11/14/2007           |                              |                        |
| NIXON & VANDERHYE, PC<br>901 NORTH GLEBE ROAD, 11TH FLOOR<br>ARLINGTON, VA 22203 |             |                      | EXAMINER<br>LAVINDER, JACK W |                        |
|  |             |                      | ART UNIT<br>3677             | PAPER NUMBER           |
|  |             |                      | MAIL DATE<br>11/14/2007      | DELIVERY MODE<br>PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Interview Summary

Application No.

10/510,603

Applicant(s)

LYON, ROY

Examiner

/Jack W. Lavinder/

Art Unit

3677

All participants (applicant, applicant's representative, PTO personnel):

(1) /Jack W. Lavinder/

(3) \_\_\_\_\_

(2) Ms. Lester

(4) \_\_\_\_\_

Date of Interview: 02 November 2007

Type: a) ☒ Telephonic b) ☐ Video Conference  
c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No

If Yes, brief description: \_\_\_\_\_

Claim(s) discussed: 30

Identification of prior art discussed: Perez, Webb, Flood


Agreement with respect to the claims f) ☐ was reached. g) ☐ was not reached. h) ☒ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: discussed proposed after final amendment (attached). Suggested defining the down bar as including a first section and a second enlarged flange section and also suggested changing "cross-sectional area of the cord" in the last paragraph to "diameter of the cord".

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

  
Examiner's signature, if required

## Summary of Record of Interview Requirements

### Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

### Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

#### Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

#### 37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,  
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

### Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

**Nixon & Vanderhye PC.**  
ATTORNEYS AT LAW11TH FLOOR  
901 NORTH GLEBE ROAD  
ARLINGTON, VIRGINIA 22203-1808TELEPHONE: (703) 816-4000  
FACSIMILE: (703) 816-4100  
WRITER'S DIRECT DIAL NUMBER:  
(703) 816-**FACSIMILE COVER SHEET**  
**PLEASE DELIVER IMMEDIATELY!!!!**

Our Ref.: 620-340

Your Ref.: 10/510,603

Date: November 1, 2007

To: Examiner Lavinder

Firm: US Patent Office

Facsimile No.: 571-273-7119

From: Michelle N. Lester

Number of Pages (including cover sheet): 14

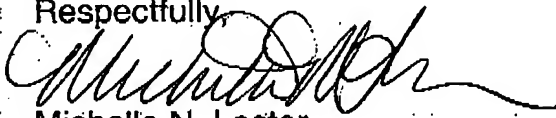
(IF YOU DO NOT RECEIVE ALL OF THE PAGES OR ENCOUNTER DIFFICULTIES IN TRANSMISSION,  
PLEASE CONTACT US IMMEDIATELY AT (703-816-4000).

FACSIMILE OPERATOR

ATTACHMENT/S:

MESSAGE:Attached is the proposed amendment to be discussed during the telephone  
interview scheduled for 9:30 am on November 2, 2007.

Respectfully,

  
Michelle N. Lester  
Reg. No. 32,331**CONFIDENTIALITY NOTE**

The documents accompanying this facsimile transmission contain information belonging to Nixon & Vanderhye, which is confidential and/or legally privileged. This information is only intended for the use of the individual or entity named above. IF YOU ARE NOT THE NAMED RECIPIENT, YOU ARE HEREBY NOTIFIED THAT ANY DISCLOSURE, COPYING, DISTRIBUTION OR TAKING OF THIS INFORMATION FOR ANY USE WHATSOEVER IS STRICTLY PROHIBITED. If you have received this facsimile in error, please immediately contact us by telephone to arrange for return of the original documents to us.

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of

LYON, Roy

Atty. Ref.: MNL-620-340; Confirmation No. 3612

Appl. No. 10/510,603

TC/A.U. 3677

Filed: October 8, 2004

Examiner: Lavinder

For: ATTACHMENT COMPRISING A FLEXIBLE CORD

\* \* \* \* \*

November 1, 2007

Mail Stop AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**DRAFT**

Sir:

**AMENDMENT UNDER RULE 116**

In response to the Official Action dated July 2, 2007, for which petition is hereby made for a one month extension of time, kindly enter the following amendment and remarks.

LYON, Roy  
Appl. No. 10/510,603

### AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

30. (Currently Amended) An attachment assembly comprising a plurality of attachments releasably attached to a common spine and intended to be secured to an article by a tagging gun, the each attachment comprising:

a limp flexible cord formed from several fibre strands which have been twisted ~~to~~ together, the cord being without resilient tendency to return to an initial position;

a cross-shaped member or a T-shaped member, said cross-shaped or T-shaped member having a plastic cross bar and down bar, the down bar having an enlarged flange, the enlarged flange being moulded around one end of the flexible cord; and

a terminal member moulded at the other end of the flexible cord, wherein, at one end of the flexible cord, the flexible cord is fixed to the down bar of the cross-shaped or T-shaped member, said terminal member being fixed to the other end of the flexible cord.

wherein each of said attachments is releasably attached to said common spine by an extension bar extending from the common spine to said cross bar so that each attachment is independently severable from said common spine, and wherein the cross-sectional area of the cord is greater than that of the down bar, but smaller than that of the enlarged flange.

31-32. (Canceled)

describe  
down bar  
as a 1st sect  
and an enlarged  
flange

support  
in place

down bar  
includes  
enlarged  
flange

change  
to "diameter"

LYON, Roy  
Appl. No. 10/510,603

common spine to said cross-shaped member or said T-shaped member~~cross bar~~, each attachment being independently severable from said common spine, said apparatus comprising a mould having:

a first recess for moulding said common spine and said cross-shaped or T-shaped members;

second recesses for moulding said terminal members; and

cord support means for supporting a cord that extends between and at least partially into said first and second recesses, wherein said first recess includes enlarged flange portions for surrounding the cord.

39. (Canceled)

40. (Currently Amended) A method for making an assembly comprising a plurality of attachments releasably attached to a common spine, each attachment comprising:

a limp flexible cord formed from several fibre strands which have been twisted together, the cord being without resilient tendency to return to an initial position;

a cross-shaped member or a T-shaped member, said cross-shaped or T-shaped member having a plastic cross bar and down bar; the down bar having an enlarged flange, the enlarged flange being moulded around one end of the flexible cord; and

a terminal member moulded at the other end of the flexible cord, wherein, ~~at one end of the flexible cord, the flexible cord is fixed to the cross-shaped or T-shaped member, said terminal member being fixed to the other end of the flexible cord, said assembly further comprising a common spine, wherein each of said attachments being~~

LYON, Roy  
Appl. No. 10/510,603

33. (Currently Amended) An ~~attachment~~assembly according to claim 30 wherein the cord is formed of a natural material.

34. (Currently Amended) An ~~attachment~~assembly according to claim 33 wherein the cord is formed of cotton.

35-36. (Canceled)

37. (Currently Amended) An assembly according to claim ~~35-30~~ further comprising teeth on the common spine, between the attachments.

38. (Currently Amended) Apparatus for making an assembly comprising a plurality of attachments releasably attached to a common spine, each attachment comprising:

a limp flexible cord formed from several fibre strands which have been twisted together, the cord being without resilient tendency to return to an initial position;

a cross-shaped member or a T-shaped member, said cross-shaped or T-shaped member having a plastic cross bar and down bar, the down bar having an enlarged flange, the enlarged flange being moulded around one end of the flexible cord; and

a terminal member moulded at the other end of the flexible cord, wherein, ~~at one end of the flexible cord, the flexible cord is fixed to the cross shaped or T shaped member, said terminal member being fixed to the other end of the flexible cord, said assembly further comprising a common spine, wherein each of said attachments being is releasably attached to said common spine via~~ by an extension bar extending from the



LYON, Roy  
Appl. No. 10/510,603

~~is~~ releasably attached to said common spine ~~via said cross shaped member or said T-shaped member~~ by an extension bar extending from the common spine to said cross bar, each attachment being independently severable from said common spine, said method including the steps:

- a) providing a mould with a first recess for moulding said common spine and said cross-shaped or T-shaped members and second recesses for moulding said terminal members;
- b) placing said flexible cords in the mould so that they extend between and pass at least partially into said recesses;
- c) injecting liquid plastics material into said recesses and allowing it to solidify.

41. (Previously Presented) A method according to claim 40 wherein in step (b) a separate flexible cord is placed between each respective second recess and said first recess.

42. (Previously Presented) A method according to claim 40 further including the step of cutting said cord to separate the attachments formed in step (c) from surplus cord that is not part of said attachments.

43. (Previously Presented) A method according to claim 40 wherein following step (c), the attachments that have been formed in step (c) are pulled through the mould so that lengths of cord fixed to the terminal members of said attachments, but not forming part of the attachments, extend between said first and second recesses, and then step (c) is repeated to form further attachments.

LYON, Roy  
Appl. No. 10/510,603

44. (Previously Presented) A method according to claim 43 wherein the mould is opened to allow the cords to be pulled through the mould and then the mould is closed to clamp the cords in place.

45. (Previously Presented) A method according to claim 40 wherein in step (b) the flexible cord is positioned so that it extends back and forth between said second recesses and the first recess.

46. (Previously Presented) A method according to claim 45 wherein, after step (c), the cord is cut to sever cord connections between adjacent terminal portions and the cord is cut to sever cord connections between adjacent cross-shaped or T-shaped members.

LYON, Roy  
Appl. No. 10/510,603

### **REMARKS/ARGUMENTS**

Reconsideration and allowance in view of the foregoing amendments and the following remarks are respectfully requested.

On March 30, 2007 an Information Disclosure Statement with Form PTO/SB/08a was filed in the subject application. As of the present date, however, the initialed and dated Form PTO/SB/08a has not been returned to the offices of the undersigned. Please return a copy of the initialed Form/SB/08a to us as soon as possible so that our file in this regard is complete.

In the Official Action, claims 30 and 32-34 were rejected under 35 U.S.C. § 102(b) as being anticipated by Perez. Applicant respectfully traverses this rejection.

Anticipation under Section 102 of the Patent Act requires that a prior art reference disclose every claim element of the claimed invention. See, e.g., Orthokinetics, Inc. v. Safety Travel Chairs, Inc., 806 F.2d 1565, 1574 (Fed. Cir. 1986). The absence of any element of the claim from the cited reference negates anticipation. See, e.g., Structural Rubber Prods. Co. v. Park Rubber Co., 749 F.2d 707, 715 (Fed. Cir. 1984).

Claim 30 has been amended above to more specifically characterize the claimed assembly as including a plurality of attachments, so dependent claim 35 has been canceled. Claim 30 has also been amended to require that the down bar of each attachment has an enlarged flange, molded around one end of the flexible cord. Consequently, claim 32 has also been canceled. Claim 30 has further been amended to require that the cross-sectional area of the cord is greater than the cross-sectional area of the down bar, but smaller than the cross-sectional area of the enlarged flange. This feature is mentioned in the application as filed at page 6, lines 3-6 and at page 14, lines 12-14. Claims 38 and 40 have been similarly amended.

LYON, Roy  
Appl. No. 10/510,603

As the Examiner will note, claim 30 requires that each attachment be attached to the common spine by an extension bar extending from the common spine to the cross bar. This requires that the common spine be located at the cross bar end of the attachments, rather than at the terminal member end.

The Examiner relies on Perez (US 3,977,050) to argue that claim 30 is anticipated. However, Perez does not disclose a limp flexible cord formed from several fibre strands that have been twisted together, the cord being without resilient tendency to return to an initial position. Perez does not disclose such a cord explicitly or implicitly or by reference.

In this regard, the Examiner with the benefit of hindsight focuses on the words "string section" in Perez and assumes that a skilled artisan would understand this is meaning a cord within the scope of applicant's claim 30. Applicant respectfully disagrees. Indeed, the skilled reader must necessarily consider the words "string section" in Perez in the context of Perez's disclosure.

Perez explains in the background section (column 1) that the prior art fastener assemblies are formed of polymers such as nylon, polypropylene or polyethylene. These assemblies are formed by moulding and then stretching (see column 1 lines 25-31). However, it is explained that polypropylene fasteners have a disadvantage in that this process causes the crossbars of the fasteners to become misaligned.

The invention in Perez is set out as the composition of the polymer used in the fastener. This is set out in all of the claims and at column 1 line 56 to column 3 line 59. The advantage of these compositions is said to be that the crossbars 25 do not tend to become misaligned during handling and packaging. This is explained as being a result of the composition of the fastener. It is recommended to add 5% polyester to the nylon used as the main component. Column 2 lines 2-8 has the following guidance:

LYON, Roy  
Appl. No. 10/510,603

As noted above, claim 30 now more particularly defines an assembly of attachments. Each attachment of the assembly is releasably attached to a common spine and is intended to be secured to an article, e.g., by a tagging gun. Such tagging guns are well known, one such tagging gun being schematically illustrated in Figure 5 of the present application.

Typical tagging guns have been designed in order to work with attachments having particular dimensions. Such attachments in the prior art tend to be formed integrally by injection moulding of plastics material. The problems with such attachments, in particular the uncomfortable rigidity of the filament section, are explained already in the present application.

It is a specific aim of the present application to provide an assembly of attachments that provide a more comfortable structure by using, in place of the prior art filament section, a limp flexible cord.

In order to provide suitable comfort to the attachment, and for reasons of overall strength of the attachment, the cord requires a relatively large cross-sectional area. However, as explained above, typical tagging guns are designed to work with attachments having specific, typically smaller, dimensions. The cross bar and down bar of known attachments is intended to be attached through an article by firing the cross bar and down bar through a slotted needle of a tagging gun. This places limits on the cross-sectional area of the cross bar and down bar.

The present invention overcomes the apparent conflict between the need for a narrow cross bar and down bar and a wider limp cord. This is achieved by the provision of an enlarged flange as a part of the down bar, the enlarged flange being moulded around the end of the cord. This solution provides both the required dimensions of the cross bar and down bar and of the cord, and also ensures suitable strength of connection between the down bar and the cord.

LYON, Roy  
Appl. No. 10/510,603

...in an injection molding machine with a suitable mold, as employed in the art, and molded in the conventional manner there were formed fastener assemblies 22...

This is therefore a specific requirement of the described assembly 22, that it be formed by a conventional injection moulding process. As set out in the background section, this process requires moulding of the assembly and then stretching of the filament. The skilled reader would understand that this process could not possibly result in an attachment within the scope of applicant's claim 30, which requires a limp flexible cord formed by twisting fibre strands. The advantages of using a limp flexible cord have been explained previously.

The Examiner points to Webb (US 255480) and Flood (US 2131372 and US 2915177) as evidence of the meaning of the word "string". Firstly, we note that Webb is not concerned with injection moulding, and so would not be considered by the skilled artisan as being of any relevance to Perez. Secondly, Webb is a very old document compared to Perez, and would not be considered as suitable art with which to interpret the meaning of Perez. Similar comments apply to the Flood documents.

For all the reasons advanced above, it is respectfully submitted that Perez, whether taken alone or considered in view of the secondary references, do not teach or suggest a cord as specifically defined in applicant's independent claims.

Claim 30 also requires that there is a common spine attached to the cross bar.

Perez discloses (see Figs 1 and 2) that the assembly includes a common spine 22'. The common spine is attached to a cross bar 25 of each attachment by a respective connector 22. At the opposite end of each attachment is button or head 26. As illustrated in Figs. 5 and 6, it is intended that the common spine 22' and the cross bars 25 are fed through needle 76 using tagging gun 20.

However, present claim 30 requires that the common spine is attached to the cross bar, and that the cross bar is part of a cross-shaped or T-shaped member that

LYON, Roy  
Appl. No. 10/510,603

also includes a down bar. The down bar has an enlarged flange moulded around the cord. This feature is not shown in Perez. The Examiner points to button or head 26 as having an enlarged flange. However, this is not moulded around a cord and is located at the wrong end of the attachment compared with claim 30. Button or head 26 corresponds instead to the terminal member of claim 30. Perez attaches no importance to the shape of the button or head, and indeed ensures that the cross bar 25 does not have the same shape. The skilled artisan is therefore taught by Perez that it is undesirable to use the shape of the button or head 26 in Perez within the tagging gun.

Therefore, this feature further distinguishes claim 30 from Perez.

The cross bar 25 in Perez would be unsuitable for use with the present invention. In the view of the applicant, a cross bar 25, if moulded around a cord, would not provide sufficient connection between the cross bar and the cord. The connection would be too weak. The present invention avoids this situation by using a cross bar and a down bar, the down bar having an enlarged flange. In this way, a relatively fat cord can be used (for reasons of comfort) and there can be provided a strong connection between the cross bar and the cord. However, the cross bar and the down bar can also be provided with suitable cross sectional areas to allow them to be used with conventional tagging guns. These features provide specific advantages over the prior art that are not taught or suggested by Perez, nor indeed by any other cited prior art documents. For these reasons, claim 30 is not anticipated by nor obvious from the cited references.

Claims 35-36 were rejected under 35 U.S.C. § 103(a) as unpatentable over Perez in view of Wada. Claim 37 was rejected under 35 U.S.C. § 103(a) as unpatentable over Perez in view of Ueno. Claims 38-46 were rejected under 35 U.S.C. § 103(a) as unpatentable over Perez in view of Derringer and Cato. These claims include the above discussed features of claim 30 and are therefore submitted to be patentable over Perez taken alone or in combination with the secondary references for the same reasons.

LYON, Roy

Appl. No. 10/510,603

All objections and rejections have been addressed. It is respectfully submitted that the present application is in condition for allowance and a notice to that effect is solicited.

Respectfully submitted,

**NIXON & VANDERHYE P.C.**

By: \_\_\_\_\_

Michelle N. Lester  
Reg. No. 32,331

MNL:rrr  
901 North Glebe Road, 11th Floor  
Arlington, VA 22203-1808  
Telephone: (703) 816-4000  
Facsimile: (703) 816-4100



LYON, Roy  
Appl. No. 10/510,603

When the polyester comprises ten percent by weight of the molding material, substantially the same results are obtained, although the strength of the filament is less than when only five percent polyester is used in the molding process. Even greater percentages of polyester can be used but with concomitant reduction in the strength of the filament.

This clearly teaches that the filament is formed of the same material as the other molded parts. In other words, the fastener is integrally formed as a single piece, by moulding a polymer material. This is confirmed by the wording used in claim 1: "A one-piece injection molded fastener assembly...". If this is not the case, how could changing the polymer composition affect the strength of the filament?

The Examiner points to column 4 lines 20-26, which states:

Apparatus 20 uses fasteners 21 which are interconnected to provide a fastener assembly 22. Each fastener 21 includes a crossbar or bar section 25 and a button or head 26 joined by a string section or filament 27. The fastener assembly 22 also includes a rod or holder 22' and separate connectors 28 which connect the respective crossbars 25 and the rod 22'.

The use of the word "string section" here would not be understood by the skilled artisan as suggesting the use of actual "string." Instead, this term is used to assist in describing the part 27, as an adjective would be used. The skilled artisan would understand that the specific embodiment described here is within the scope of at least claim 1. To construe column 4 lines 20-26 as describing a limp flexible cord (as required by applicant's claim 30) would require that the fastener being described is not a "one-piece injection molded fastener assembly", which would therefore be outside the scope of claim 1.

Furthermore, the example described at column 4 lines 39-49 is formed by placing a suitable polymer mixture: